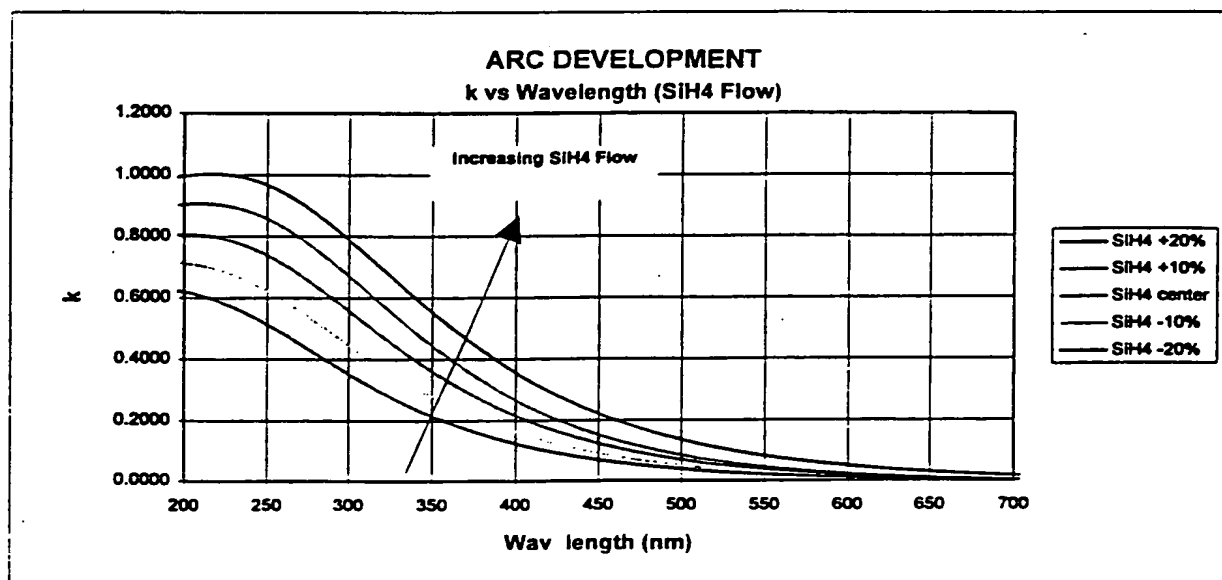
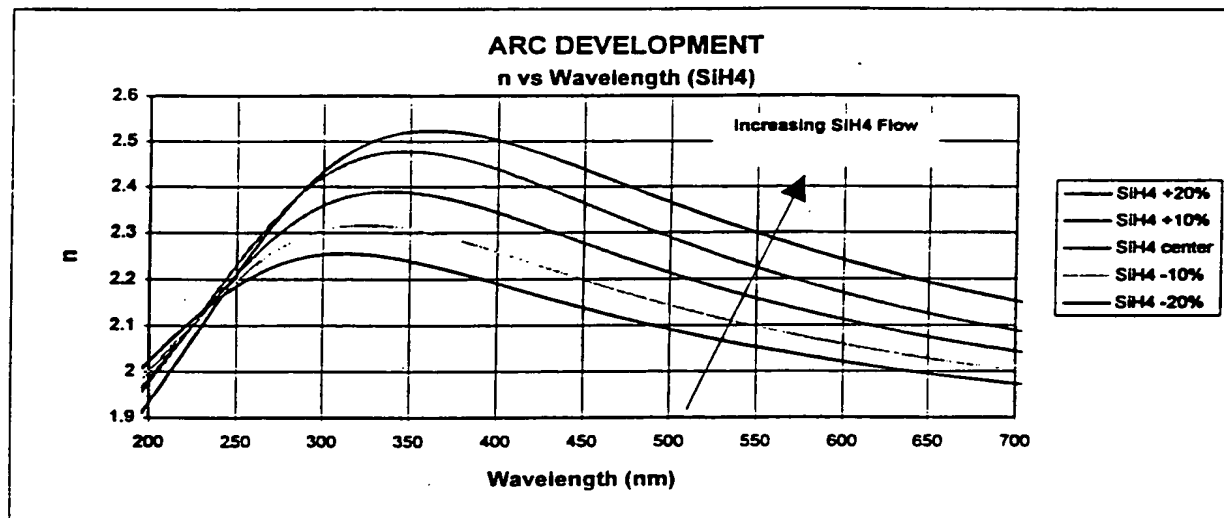
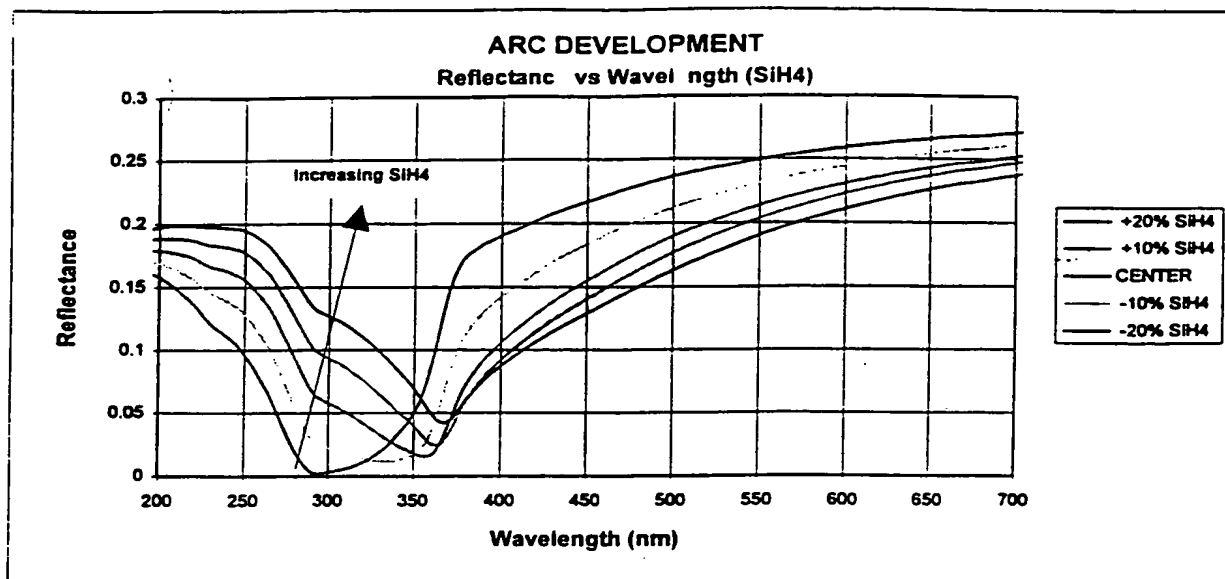


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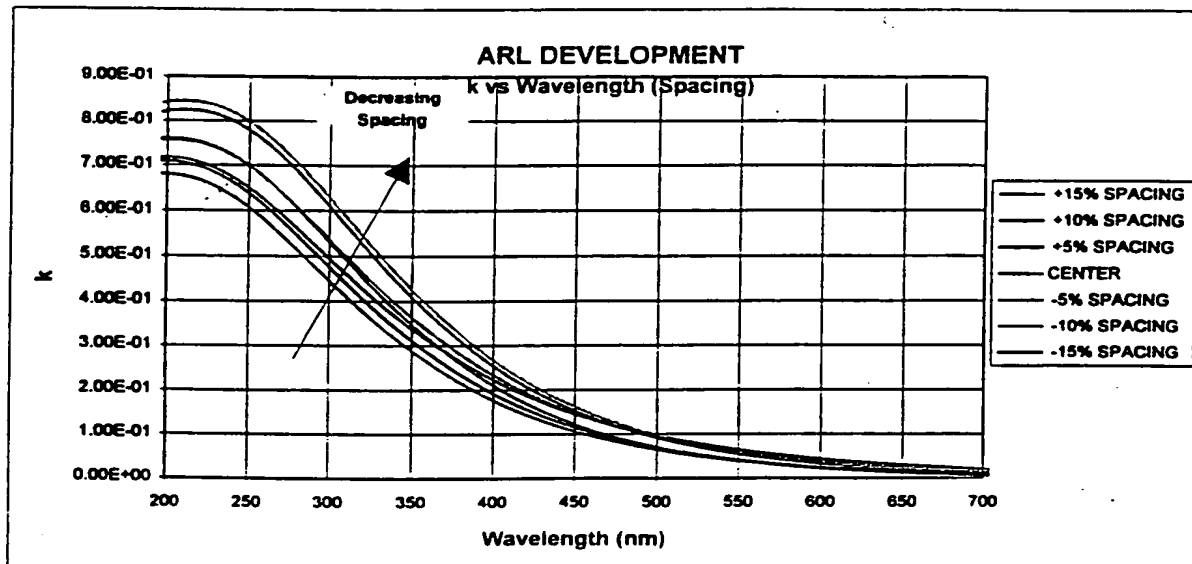
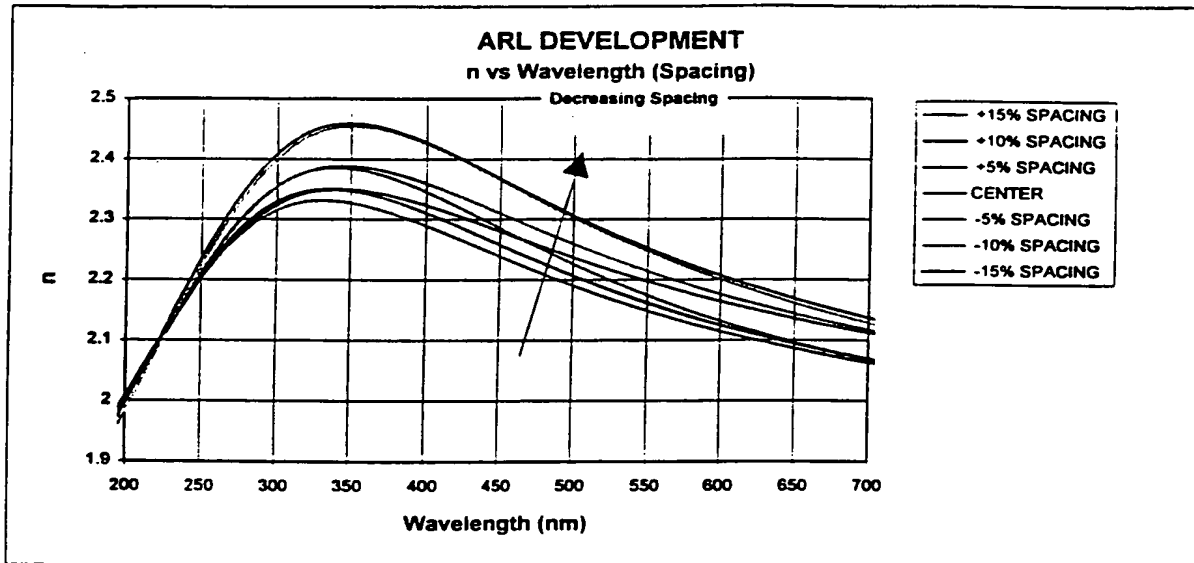
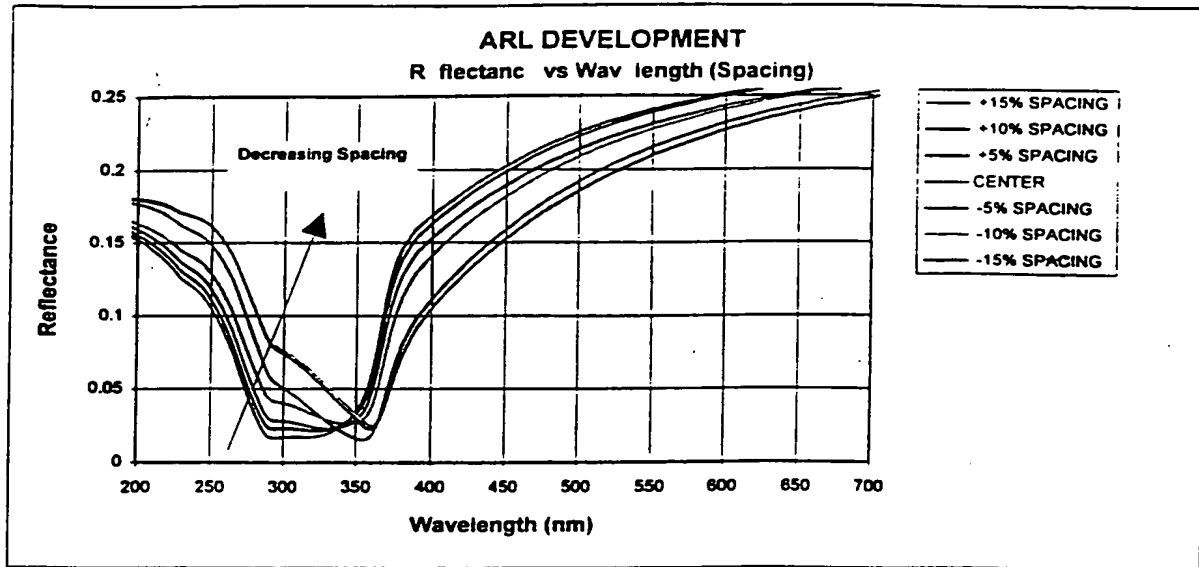
ARL Film RBS/HFS Sample Results

Process	DEEP-UV [w/NH ₃]	DEEP-UV [w/o NH ₃]	DEEP-UV [+60% SiH ₄]	DEEP-UV [Standard]	DEEP-UV [-60% SiH ₄]	I-LINE [300C dep]	I-LINE [400C dep]	I-LINE [w/o N ₂]
Faceplate	Δ Nitride	Δ Nitride	Δ Nitride	Δ Nitride	Δ Nitride	GG Nitride	GG Nitride	GG Nitride
Pumping Plate	Δ Nitride	Δ Nitride	Δ Nitride	Δ Nitride	Δ Nitride	5-hole	5-hole	13-hole
Blocker	Std. w/centr holes	Std. w/centr holes	Standard	Standard	Standard	Standard	Standard	Standard
Temperature(°C)	350	350	350	350	350	300	400	350
Pressure(torr)	4.6	4.6	4.6	4.6	4.6	5.3	5.3	5.0
Spacing(mils)	500	500	500	500	500	525	525	460
RF1 (watts)	160	160	160	160	160	130	130	150
SiH ₄ (sccm)	51	51	81	51	20	63	63	82
N ₂ O (sccm)	30	155	30	30	30	34	34	90
N ₂ (sccm)	200	200	200	200	200	200	200	0
He (sccm)	2200	2200	2000	2000	2000	1900	1900	2200
NH ₃ (sccm)	125	-	-	-	-	-	-	-
Thickness	700A	1200A	300A	300A	300A	300A	300A	300
n	2.3	1.8	-	2.1	-	2.5	2.65	2.5
k	0.3	0.14	-	0.7	-	0.42	0.63	0.39
% reflectance	1.10%	1.80%	-	15%	-	4.000%	9.00%	2.5%
Atomic conc.(%)								
H	15.0%	13.5%	17.0%	16.0%	14.0%	20.0%	13.0%	8.0%
C	0.0%	0.0%	10.0%	5.0%	0.0%	8.0%	10.0%	0.00%
N	34.0%	15.0%	15.3%	18.1%	15.0%	17.0%	17.0%	10.0%
O	9.0%	34.5%	15.7%	15.9%	31.0%	15.0%	15.0%	20.0%
Si	42.0%	37.0%	42.0%	45.0%	40.0%	40.0%	45.0%	52.0%

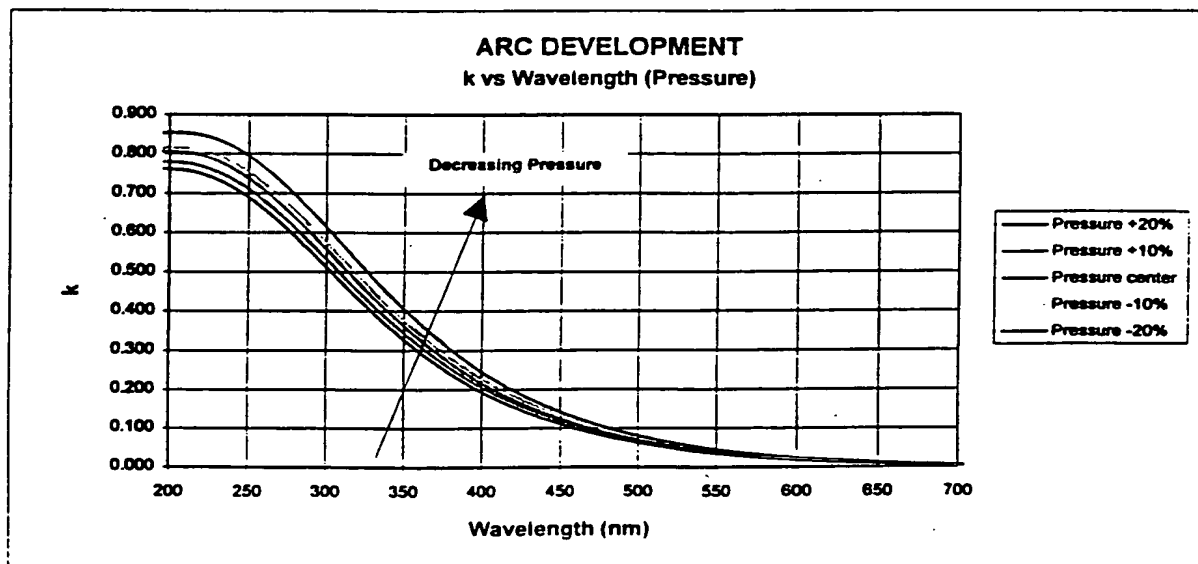
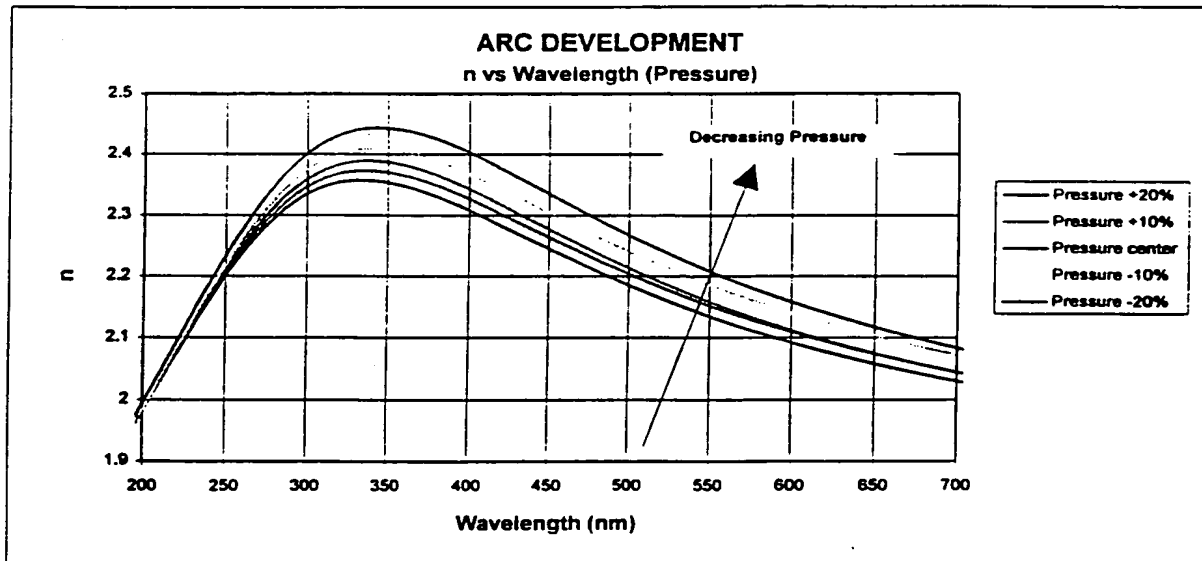
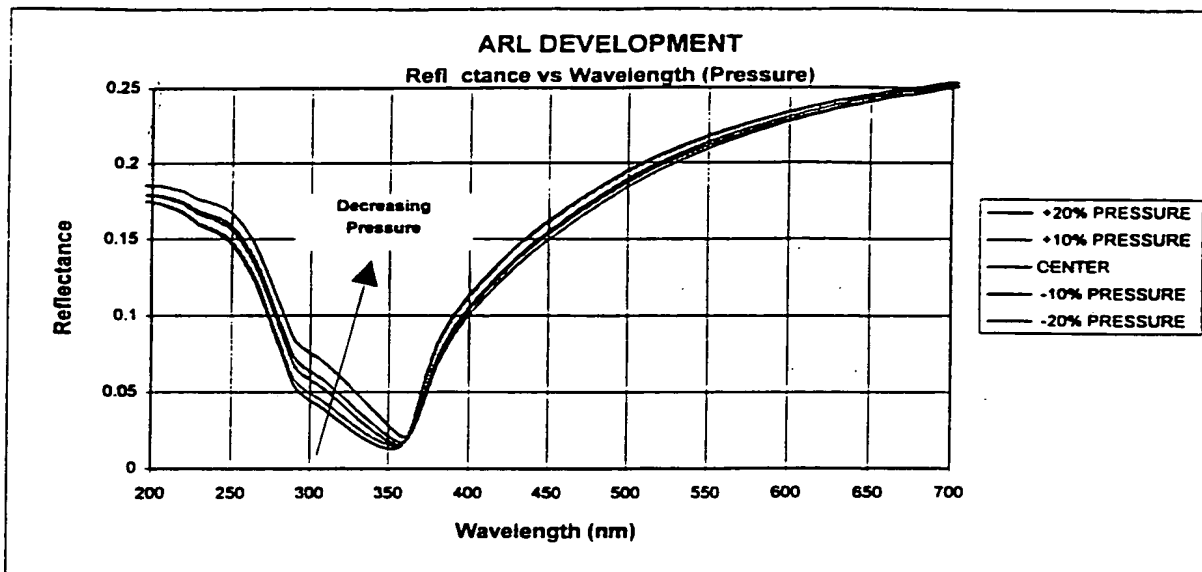
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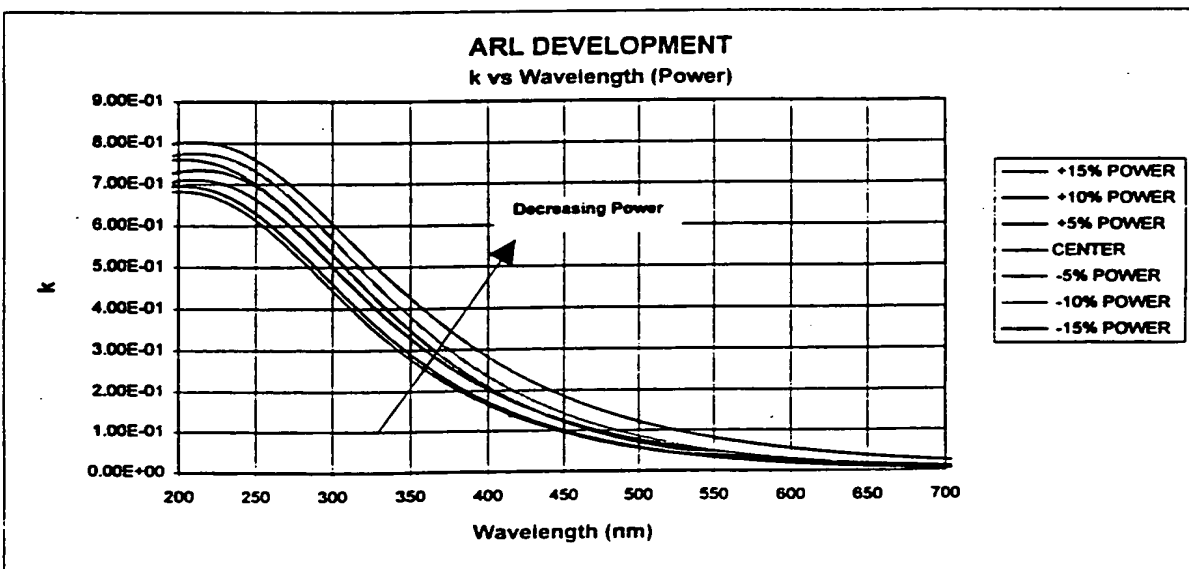
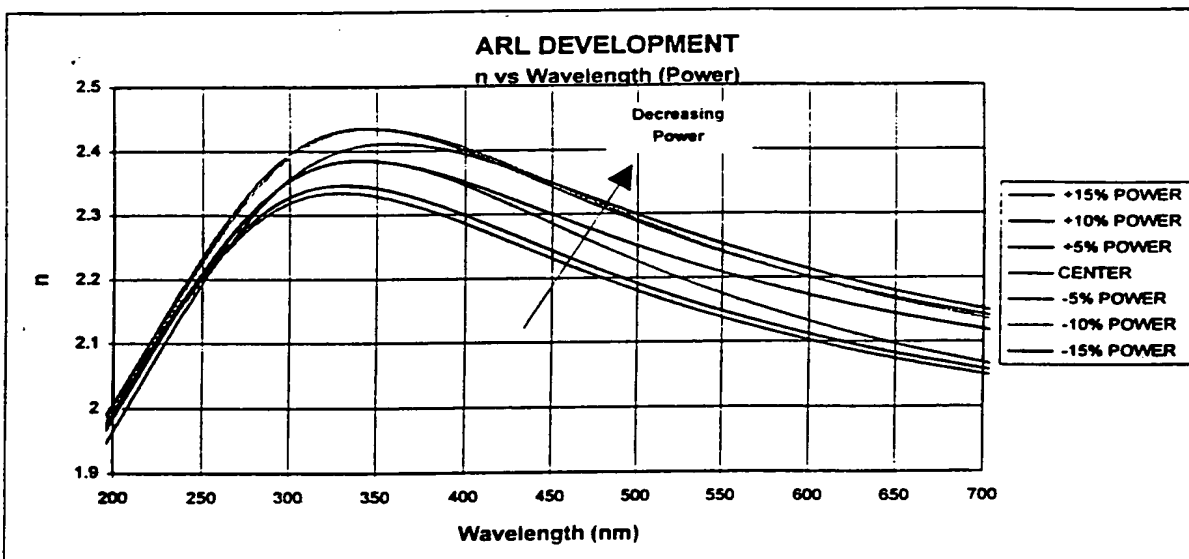
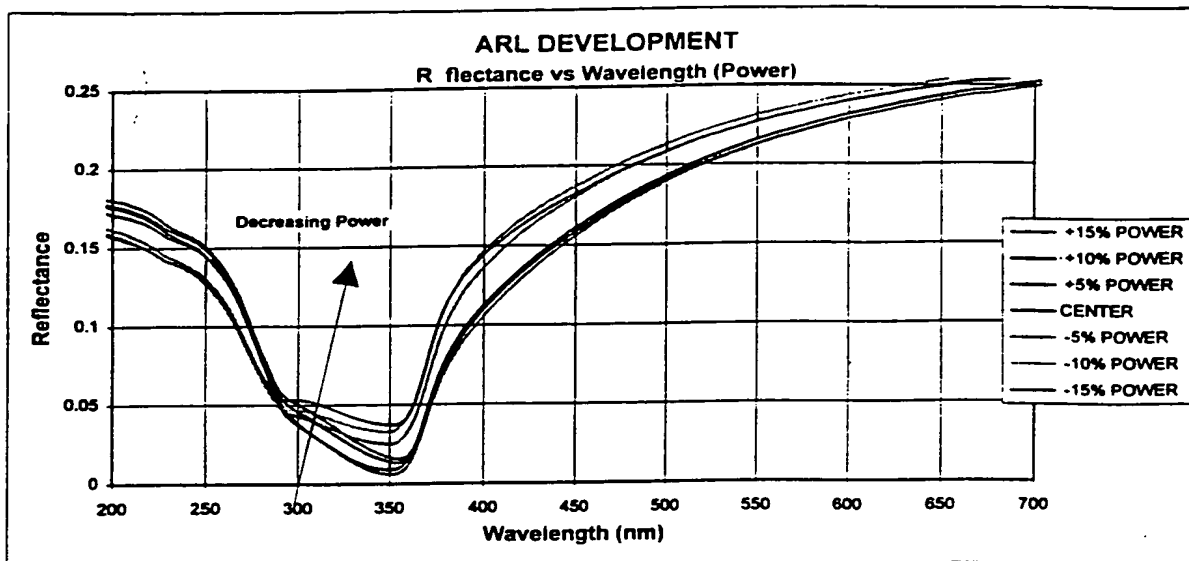
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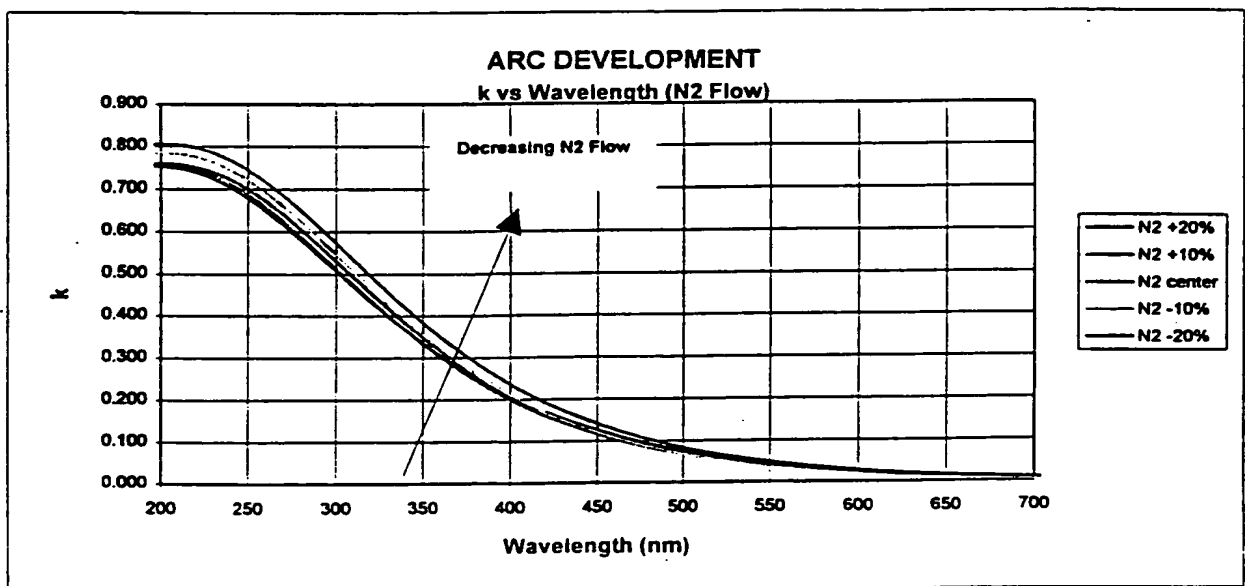
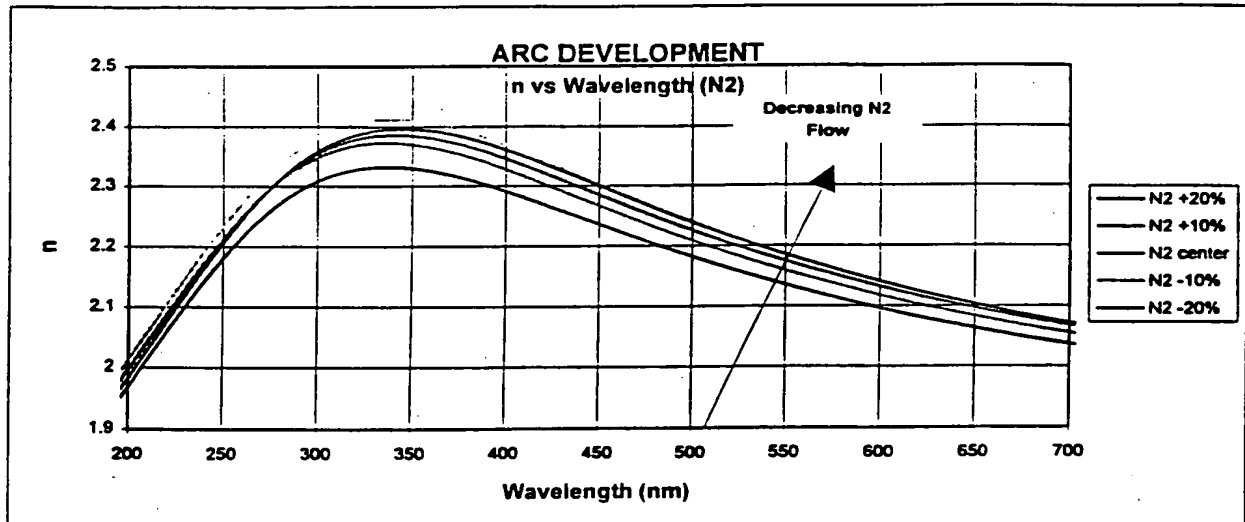
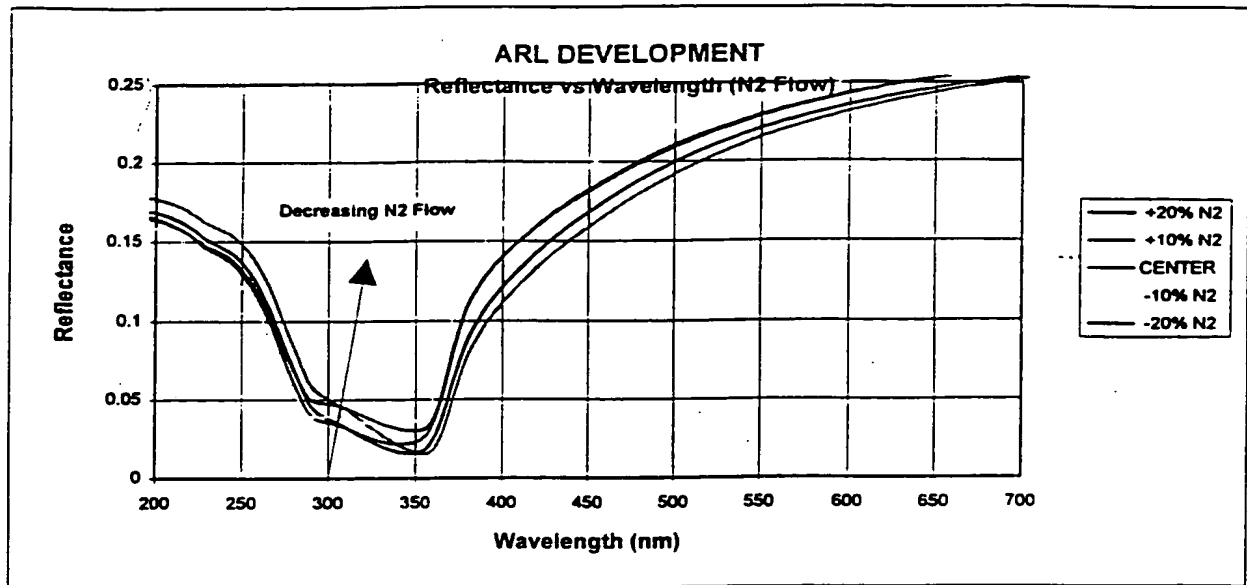
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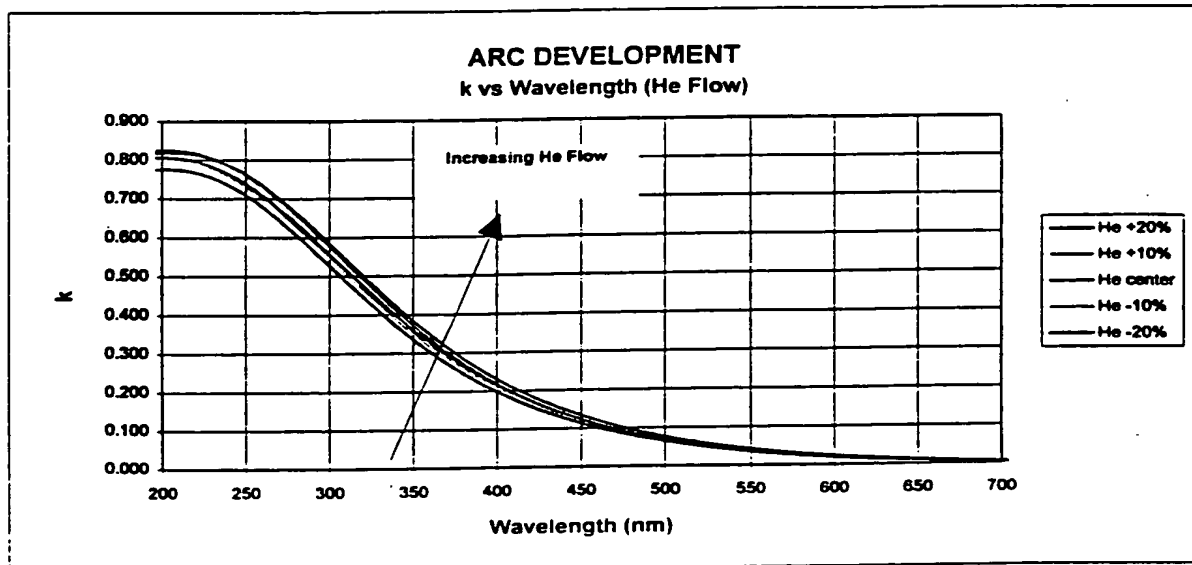
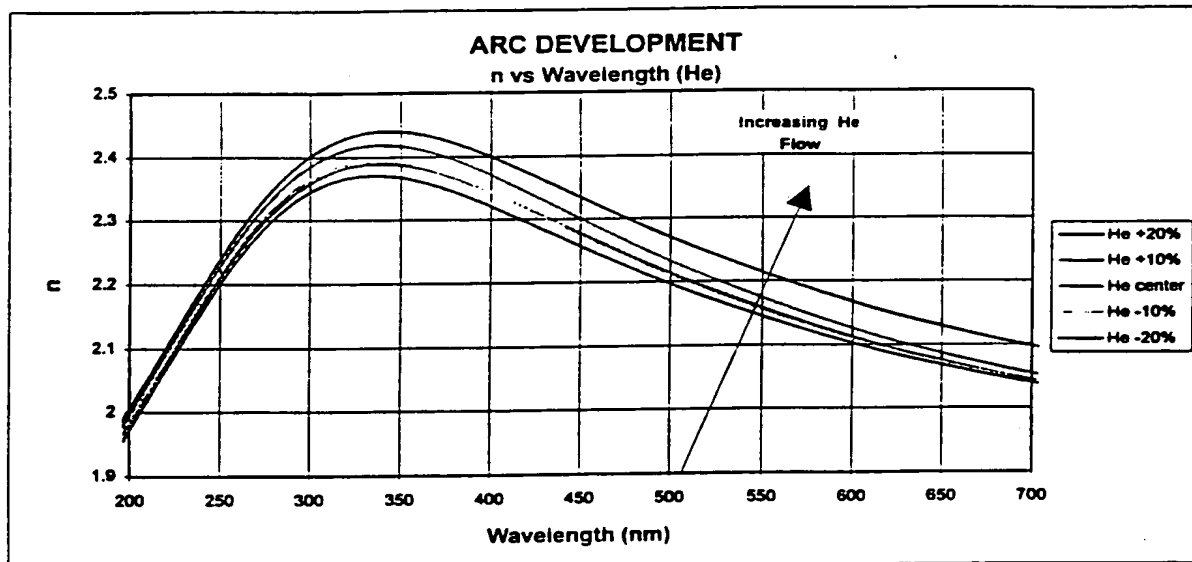
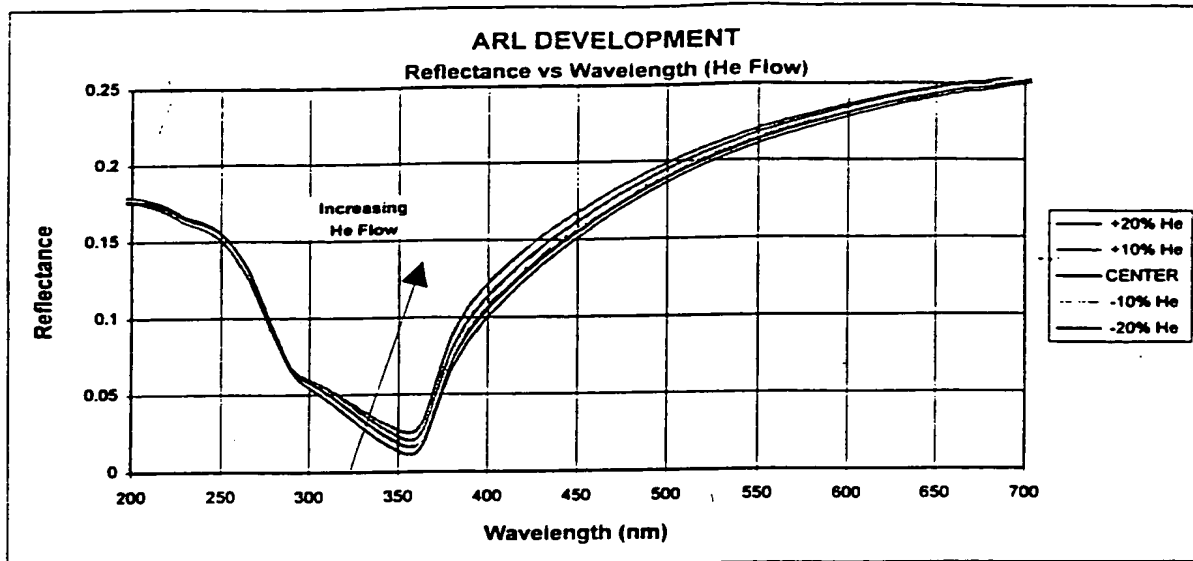
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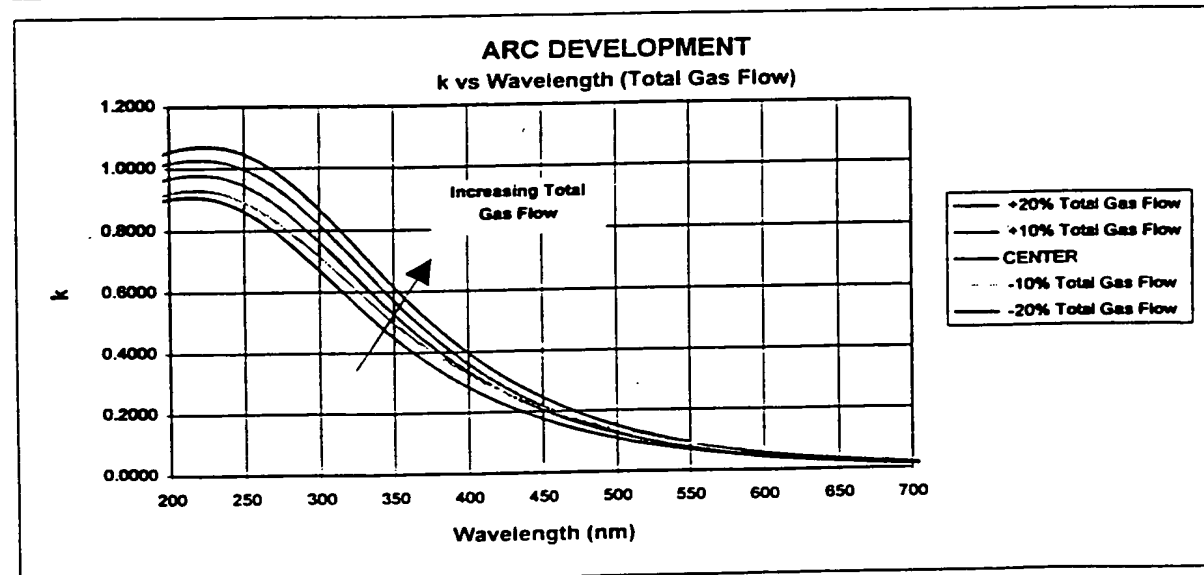
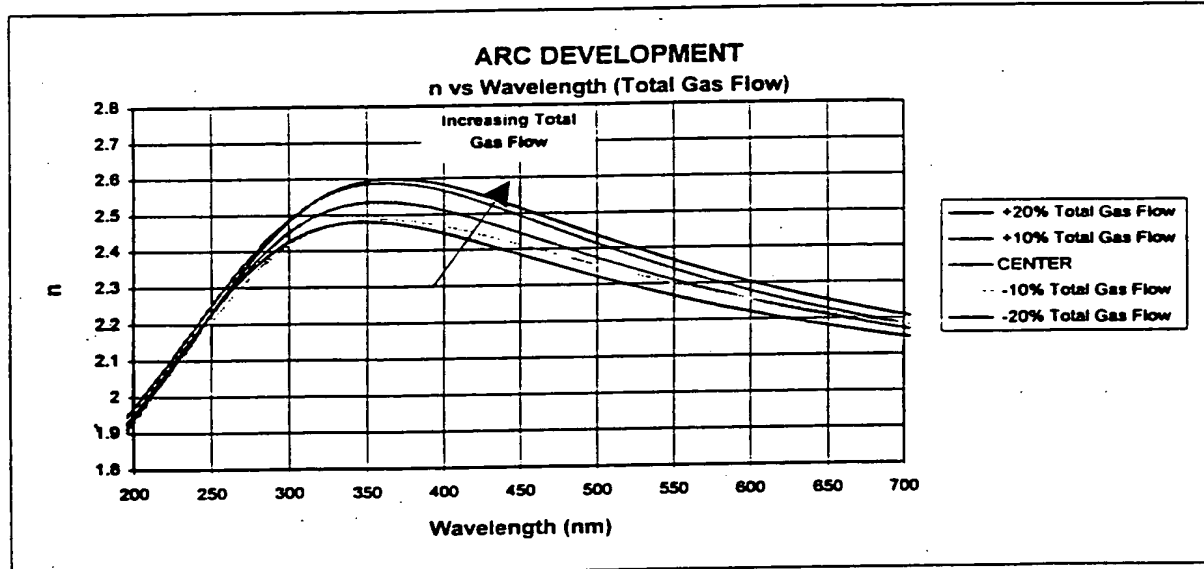
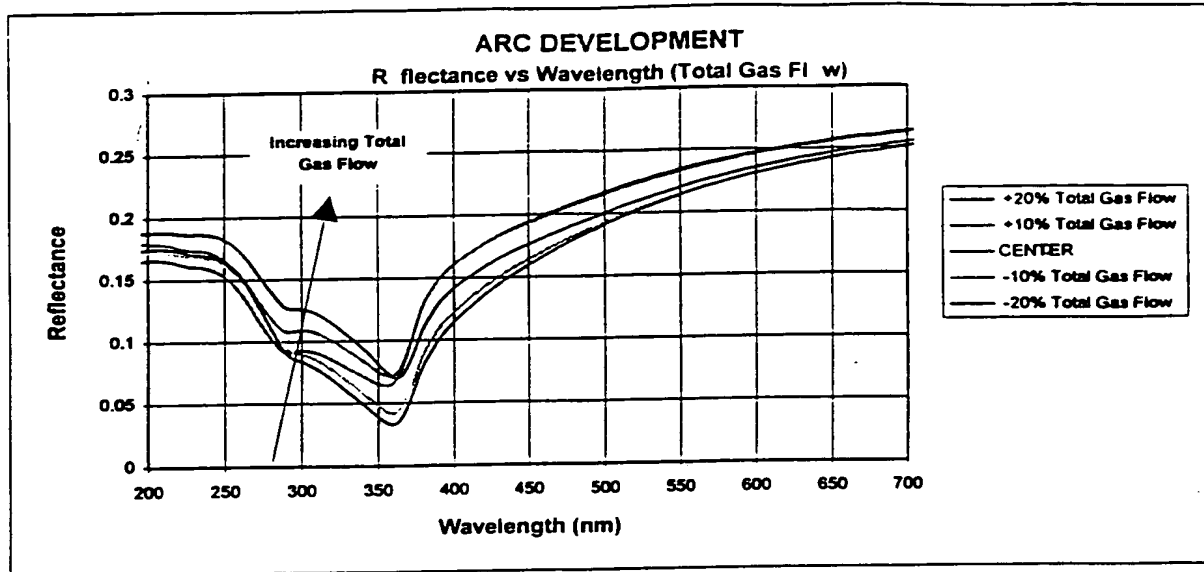
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